The Corps of Discovery

Staff Ride Handbook for the Lewis and Clark Expedition

Charles D. Collins, Jr.
and the Staff Ride Team
Combat Studies Institute

Combat Studies Institute
US Army Command and General Staff College
Fort Leavenworth, Kansas 66027-1352

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FOREWORD

Since the early 20th century, officers of the US Army have honed their professional knowledge and skills by conducting staff rides to historical battlefields. In most cases, these educational exercises have focused on the tactical and operational levels of war, through a detailed examination of a major battle or campaign. The Lewis and Clark staff ride presented in this booklet, by contrast, focuses on a US Army mission to explore the unknown during a time of peace.

By studying the Lewis and Clark Expedition of 1804-1806, traveling the route, and visiting the places where key decisions were made, the military professional can gain a greater appreciation of what it means to be a leader in today's Army and gain an enhanced understanding of the time-honored leadership principle of Be, Know, Do. The captains had commendable character, the "Be" of Be, Know, Do. They had the courage to do what was right regardless of the circumstances or the consequences. In short, they lived the Army values of honor, loyalty, and selfless service. The captains also repeatedly demonstrated well-honed interpersonal, conceptual, technical, and tactical skills, the "Know" of Be, Know, Do. They mastered their tasks and constantly strove to add to their knowledge and skills. Most important, the captains' actions demonstrated the Army values of duty, respect, integrity, and personal courage, the "Do" of Be, Know, Do. Their mastery of agile and adaptive leadership was the single most important factor in the success of their mission.

In many ways, Captains Lewis and Clark faced a more daunting leadership challenge in their journey into the unknown than that faced by the crews of the Apollo missions to the moon. In their epic journey to the Pacific and back, they had no communication with "Houston Control" and had to rely completely on their own skills, judgment, and resources. Fortunately, they were equal to the challenge, and they had their commander's clear intent from the president. They serve today as outstanding examples of what an Army leader must Be, Know, Do. They understood what a leader must be, a person of character; they demonstrated what a leader must know, mastery of the profession; and they exercised what a leader must do, take charge and motivate others to accomplish the mission, however daunting the obstacle.

May 2004

Lawyn C. Edwards
Colonel, Aviation
Director, Combat Studies Institute

INTRODUCTION

Ad bellum Pace Parati: prepared in peace for war. This sentiment was much on the mind of Captain Arthur L. Wagner as he contemplated the quality of military education at the Infantry and Cavalry School at Fort Leavenworth, Kansas, during the 1890s. Wagner believed that the school's curricula during the long years of peace had become too far removed from the reality of war, and he cast about for ways to make the study of conflict more real to officers who had no experience in combat. Eventually, he arrived at a concept called the staff ride, which consisted of detailed classroom study of an actual campaign followed by a visit to the sites associated with that campaign. Although Wagner never lived to see the staff ride added to the Leavenworth curricula, an associate of his, Major Eben Swift, implemented the staff ride at the General Service and Staff School in 1906. In July of that year, Swift led a contingent of 12 students to Chattanooga, Tennessee, to begin a two-week study of the Atlanta Campaign of 1864.

The staff ride concept pioneered at Leavenworth in the early years of the 20th century remains a vital part of officer professional development today. At the US Army Command and General Staff College, the Army War College, ROTC detachments, and units throughout the world, US Army officers arestudying war vicariously in peacetime through the staff ride methodology. That methodology (in-depth preliminary study, rigorous field study, and integration of the two) need not be tied to a formal schoolhouse environment. Units stationed near historic sites can experience the intellectual and emotional stimulation provided by standing on the hallowed ground where soldiers once contended for their respective causes. Yet units may find themselves without many of the sources of information on a particular campaign that are readily available in an academic environment. For that reason, the Combat Studies Institute has begun a series of handbooks that will provide practical information on conducting staff rides to specific campaigns and battles. These handbooks are not intended to be used as a substitute for serious study by staff ride leaders or participants. Instead, they represent an effort to assist officers in locating sources, identifying teaching points, and designing meaningful field study phases. As such, they represent a starting point from which a more rigorous professional development experience may be crafted.

The Lewis and Clark Expedition 1804-06 is an effective vehicle for a staff ride. It raises a variety of teaching points that are relevant to today's officer. In addition, the expedition exemplifies the values that have guided the American soldier to the present day.

The *Staff Ride Handbook for the Lewis and Clark Expedition* provides a systematic approach to the analysis of this key operation. Part I consists of an expedition overview that establishes the context for the individual actions to be studied in the field. Part II surveys the Army during the early 19th century, detailing the organization, weapons, transportation, logistic support and medical support for the Corps of Discovery. Part III consists of a suggested itinerary of sites to visit to obtain a concrete view of the expedition in its several phases. For each site, or "stand," there is a set of travel directions, a discussion of the action that occurred there, and vignettes by participants in the expedition that further explain the action and which also allow the student to sense the human drama of the journey into the unknown. Parts IV and V provide information on conducting a staff ride along the Lewis and Clark route, the integration phase, and logistics considerations. Appendix A provides biographical sketches of key expedition members. Appendix B provides a copy of the 'Detachment Orders' written by the officers and NCOs of the corps. Appendix C overviews the uniforms worn by the expedition members, and Appendix D provides copies of the visuals used at the instructional stands. An annotated bibliography suggests sources for further study.

I. THE US ARMY AND THE LEWIS AND CLARK EXPEDITION*

President Jefferson's Vision

Thomas Jefferson, author of the Declaration of Independence and third president of the United States, did much to help create the new nation. Perhaps his greatest contribution was his vision. Even before he became president, Jefferson dreamed of a republic that spread liberty and representative government from the Atlantic Ocean to the Pacific Ocean. As one of the leading scientific thinkers of his day, he was curious about the terrain, plant and animal life, and Indian tribes of the vast, unknown lands west of the Mississippi River. As a national leader, he was interested in the possibilities of agriculture and trade in those regions and suspicious of British, French, Spanish, and Russian designs on them.

On 18 January 1803, months before President Jefferson had acquired the region from France through the famous Louisiana Purchase, he sent a confidential letter to Congress, requesting money for an overland expedition to the Pacific Ocean. Hoping to find the Northwest Passage, Jefferson informed Congress that the explorers would establish friendly relations with the Indians of the Missouri River Valley, help the American fur trade expand into the area, and gather data on the region's geography, inhabitants, flora, and fauna.

To conduct the expedition, Jefferson turned to the U.S. Army. Only the military possessed the organization and logistics, the toughness and training, and the discipline and teamwork necessary to handle the combination of rugged terrain, harsh climate, and potential hostility of the endeavor. The Army also embodied the American government's authority in a way that civilians could not. Indeed, the Army provided Jefferson with a readily available, nationwide organization that could support the expedition—no small consideration in an era when few national institutions existed. Although the expedition lay outside the Army's usual role of fighting wars, Jefferson firmly believed that in time of peace the Army's mission went beyond defense to include building the nation.

Raising the Corps of Discovery

The man that Jefferson wanted to lead the expedition was an Army officer: his personal secretary, Capt. Meriwether Lewis. A friend and

* Section I of the handbook is a reprint of the U.S. Army Center of Military History's brochure (CMH Pub 70-75-1) written by David W. Hogan, Jr. and Charles E. White.

neighbor of Jefferson's, the 28-year-old Lewis had joined the Virginia militia to help quell the Whiskey Rebellion of 1794 and then had served for eight years as an infantry officer and paymaster in the Regular Army. In Lewis, Jefferson believed he had an individual who combined the necessary leadership ability and woodland skills with the potential to be an observer of natural phenomena.

Before Congress approved funds for the expedition, Lewis had already begun his preparations. From Jefferson he learned how to use the sextant and other measuring instruments. Together they studied Alexander MacKenzie's account of his 1793 Canadian expedition to the Pacific coast and the maps in Jefferson's collection. The president even had a special map made for Lewis that detailed North America from the Pacific coast to the Mississippi River Valley, with emphasis on the Missouri River. While the president drafted his instructions for the expedition, the captain worked on his planning and logistical preparations. In the evenings they discussed their concepts of the operation.

Leaving Washington in March, Lewis traveled to the Army's arsenal at Harpers Ferry (at that time in Virginia), where he obtained arms, ammunition, and other basic supplies while supervising the construction of an experimental iron boat frame he had designed. Next, Captain Lewis went to Lancaster and Philadelphia, Pennsylvania, where Jefferson had arranged for some of the nation's leading scientific minds to instruct Lewis in botany and natural history, medicine and anatomy, geology and fossils, and navigation by the stars. While in Philadelphia, Lewis purchased additional supplies, including a new condensed food, "portable soup." He also arranged for the Army to provide transportation for his nearly four tons of supplies and equipment from Philadelphia to Pittsburgh. Lewis then set off for Washington for a final coordination meeting with President Jefferson.

When Lewis returned to Washington in mid-June, he was nearly two months behind his original schedule. He had hoped to be in St. Louis by 1 August; but after three intensive months of preparation, Lewis realized that the successful accomplishment of his mission would require more men and another officer. Now the president handed the captain his formal instructions. Foremost among Jefferson's expectations was an all-water route to the Pacific. Lewis was told to explore and map the rivers carefully, to learn all he could about trade routes and traders of the region, and to study every Indian tribe along the way. Jefferson ordered Lewis to treat the Indians with dignity and respect and to invite their chiefs to come to Washington for a visit. Lastly, Captain Lewis was to describe the geography of the region and to bring back samples of plant and animal life. As they discussed the expedition, Jefferson acknowledged that it would

require more men and another leader.

With Jefferson's consent, Lewis wrote to his friend and former comrade, William Clark, offering him the assignment as co-commander. Both Lewis and Clark had served in the Legion of the United States under General Anthony Wayne a decade earlier. Clark had been an infantry company commander but had resigned his lieutenancy in 1796 to attend the business affairs of his older brother, General George Rogers Clark. In addition to approving the choice of William Clark, Jefferson ordered the War Department to give Lewis unlimited purchasing power for the expedition. Moreover, the president authorized the captain to recruit noncommissioned officers and men from any of the western army posts. On 4 July 1803, news arrived of the Louisiana Purchase, which resolved any international problems affecting the expedition. The next day Lewis set off for Pittsburgh.

Pittsburgh, as a riverboat-building center in 1803, provided a logical starting point for the expedition chartered to discover an all-water route to the west coast. While in Philadelphia in May, Lewis had placed an order for a keelboat for the mission. Arriving in Pittsburgh, Lewis found the builder had only just begun construction, which would take another six weeks. Lewis worried about his ability to get down the Ohio River, with its diminishing flows, and up the Mississippi River before winter set in.

Other frustrating news followed. The shipment of supplies had not yet arrived from Philadelphia. The driver had decided that the weapons were too heavy for his team and had left them at Harpers Ferry, so Lewis had to hire another teamster to bring the arms to Pittsburgh. Good news came from Clark, who had accepted Lewis' invitation to join the expedition. Clark told Lewis he would be ready to go when the keelboat reached Louisville, Kentucky. In the meantime, he would recruit only quality men: the word was out, and Clark already had many young frontiersmen eager to join the expedition. Lewis was delighted with this news, knowing Clark was an excellent judge of men.

Lewis finally left Pittsburgh on 31 August. With him were seven soldiers from the Army barracks at Carlisle, Pennsylvania, three prospective recruits, the pilot of the boat Lewis had hired in Pittsburgh, and one or two additional hands. It took them six weeks to travel down the shallow Ohio River to Louisville. Along the way Lewis had stopped for a week in Cincinnati to rest his men and take on provisions. Arriving in Louisville on 14 October, he hired a local pilot to guide the boat safely through a daunting set of rapids known as the Falls of the Ohio, then on a short way to Clarksville, Indiana Territory. Once there, Lewis set off to meet his cocaptain. Over the next two weeks, Lewis and Clark selected the first enlisted members of the expedition. They included: Sgts. Charles

Floyd and Nathaniel Pryor and Pvts. William Bratton, John Colter, Joseph and Reuben Field, George Gibson, George Shannon, and John Shields. (Colter and Shannon may have joined Lewis before he had reached Cincinnati.) These men became known as the Nine Young Men from Kentucky. Clark also decided to bring along his servant, York, a black man of exceptional size and strength.

The keelboat and two smaller, flat-bottom boats (called by their French name, pirogue) departed Clarksville on 26 October and arrived two weeks later at Fort Massac in southern Illinois Territory, about thirty-five miles upstream from the junction of the Ohio and Mississippi Rivers. Here, Lewis hired the respected Shawnee/French hunter, guide, and interpreter George Drouillard, and accepted from the post two privates: John Newman and Joseph Whitehouse. The seven soldiers from Carlisle Barracks who had been temporarily assigned to bring the keelboat down the Ohio River remained behind at Fort Massac. The party left Fort Massac on 13 November and reached the confluence of the Ohio and Mississippi Rivers the next evening. The men camped there for a week, while Lewis and Clark measured both the Ohio and Mississippi Rivers and Lewis taught Clark how to make celestial observations. The expedition then set out for St. Louis.

As they turned upstream into the powerful Mississippi River, Lewis and Clark immediately realized they needed more men. All three boats were badly undermanned, and the expedition seldom progressed more than a mile an hour moving upstream. On 28 November the men reached Fort Kaskaskia, some fifty miles south of St. Louis. The next day Lewis remained behind to confer on personnel matters and to requisition supplies, while Clark took the boats to Cahokia, a few miles below St. Louis. Lewis left Fort Kaskaskia on 5 December and arrived at Cahokia the next day. Following two days of talks with Spanish authorities, the party left Cahokia and reached St. Louis early on the morning of 11 December.

Upon arriving at St. Louis, Lewis left the party to handle logistical arrangements and to gather intelligence on Upper Louisiana. Clark took the party upriver about eighteen miles to the mouth of the Wood River, a small stream that flowed into the Mississippi River directly across from the mouth of the Missouri River. Here, Clark constructed Camp River Dubois, which was finished by Christmas Eve 1803.

Once the camp was established, Clark set about preparing for the arduous journey ahead. Throughout the winter months he selected and trained personnel, modified and armed the keelboat and pirogues, and assembled and packed supplies. For all his efforts, William Clark never received the captaincy Lewis had promised him. Instead, the War

Department commissioned Clark a Lieutenant of Artillery. Nevertheless, Lewis called Clark Captain and recognized him as co-commander, and the men of the expedition never knew differently.

On 31 March 1804, Lewis and Clark held a ceremony to enlist the men they had selected as members of "the Detachment destined for the Expedition through the interior of the Continent of North America." In addition to the eleven men previously selected, Lewis and Clark chose: Sgt. John Ordway, Cpl. Richard Warfington, and Pvts. Patrick Gass, John Boley, John Collins, John Dame, Robert Frazer, Silas Goodrich, Hugh Hall, Thomas Howard, Hugh McNeal, John Potts, Moses Reed, John Robertson, John Thompson, Ebenezer Tuttle, Peter Weiser, William Werner, Issac White, Alexander Willard, and Richard Windsor. In their Detachment Order of 1 April 1804, Captains Lewis and Clark divided the men into three squads led by Sergeants Pryor, Floyd, and Ordway. Another group of five soldiers led by Corporal Warfington would accompany the expedition to its winter quarters and then return to St. Louis in 1805 with communiqués and specimens collected thus far.

With their military organization established, Lewis and Clark began final preparations at Camp River Dubois and in St. Louis for their trek up the Missouri River. Clark molded the men into a team through a regimen of drill and marksmanship training, while Lewis was busy in St. Louis arranging logistical support for the camp and obtaining intelligence on the expedition's route and conditions along the way. Discipline was tough, and Clark made sure that the men were constantly alert, that they knew their tasks on both river and land, that their camps were neat and orderly, and that they cared for their weapons and equipment. He dealt firmly with any form of insubordination or misbehavior. At the same time he rewarded the winners of marksmanship contests and those who distinguished themselves on their work details. Clark's fine leadership proved effective, as the expedition recorded only five infractions during its two-and-a-half-year trek, a record unmatched by any other Army unit of the time.

The Journey of Exploration (14 May 1804 to 23 September 1806)

On the afternoon of Monday, 14 May 1804, Clark and his party left Camp River Dubois, crossed the Mississippi River, and headed up the Missouri. The Expedition proceeded slowly toward St. Charles, because Clark wanted to ensure the boats were loaded properly for the journey. Two days later they reached St. Charles, made adjustments to the loading plan, and awaited Lewis. At St. Charles, Clark also enlisted two additional boatmen: Pvts. Pierre Cruzatte and Francois Labiche. Both knew the tribes

of the Missouri River Valley and would serve as interpreters. On 20 May, Lewis arrived from St. Louis with a group of prominent St. Louis citizens who wanted to see the expedition launched. The next afternoon, a crowd lining the riverbank bade farewell to Captains Lewis and Clark and their expedition.

"The Commanding Officers" jointly issued their Detachment Orders for the Expedition on 26 May. This decree established a routine while making it clear to the men that this was a military expedition into potentially hostile territory. Lewis and Clark refined the organization previously agreed upon at Camp River Dubois. The three original squads were redesignated "messes" and manned the keelboat, while Corporal Warfington's detachment formed a fourth mess and rode in the "white" pirogue. The civilian boatmen formed the fifth mess and rode in the "red" pirogue. Because he was the better boatman, Clark usually stayed on the keelboat while Lewis walked on shore and made his scientific observations. Occasionally, they would rotate and Lewis would catalog specimens on the keelboat.

Captains Lewis and Clark now commanded through the three sergeants, who rotated duties on the keelboat. One always manned the helm, another supervised the crew at amidships, and the third kept lookout at the bow. The senior sergeant was Ordway, who acted as the expedition's first sergeant. He issued daily provisions after camp was set up in the evening. Rations were cooked and a portion kept for consumption the next day. (No cooking was permitted during the day.) Sergeant Ordway also appointed guard and other details. The guard detail consisted of one sergeant, six privates, and one or more civilians—fully one third of the entire party. The guard detail established security upon landing and maintained readiness throughout the encampment. All three sergeants maintained duty rosters for the assignment of chores to the five messes. The cooks and a few others with special skills were exempted from guard duty, pitching tents, collecting firewood, and making fires. Drouillard was the principal hunter and usually set out in the morning with one or more privates and rejoined the expedition in the evening with meat.

The expedition generally made good time up the Missouri River. Thanks largely to the total commitment of the crews, the keelboat and pirogues averaged a bit more than one mile per hour against the strong Missouri current. With a wind astern, the crews usually doubled their speed. Along the way, the expedition conquered every navigational hazard the Missouri River offered. In addition, the men also overcame a variety of physical ills: boils, blisters, bunions, sunstroke, dysentery, fatigue, injuries, colds, fevers, snakebites, ticks, gnats, toothaches, headaches, sore throats,

and mosquitoes. As the expedition traveled north, its members became the first Euro-Americans to see some remarkable species of animal life: mule deer, prairie dog, and antelope. Wildlife became more abundant as the expedition moved upriver. The likelihood of meeting traders and Indians also increased.

As the men traveled north, they encountered more than a dozen parties of traders, sometimes accompanied by Indians, coming downriver on rafts or in canoes loaded with pelts. On 26 June the expedition reached the mouth of the Kansas River. On 21 July, some six hundred miles and sixty-nine days upstream from Camp River Dubois, the expedition reached the mouth of the Platte River. On 28 July Drouillard returned from hunting with a Missouria Indian. The next day Lewis and Clark sent boatman "La Liberte" (Jo Barter) with the Indian to the Oto camp with an invitation for their chiefs to come to the river for a council.

At Council Bluff on Friday morning, 3 August 1804, the expedition held its first meeting with six chiefs of the Oto and Missouria tribes. This amicable council set the pattern for later meetings between the expedition and Native Americans. The outstanding characteristic of these councils was the mutual respect between the expedition and its native hosts. At midmorning, under an awning formed by the keelboat's main sail and flanked by the American flag and troops of the expedition, Captains Lewis and Clark awaited the Indian chiefs. The two captains wore their regimental dress uniform, as did Sergeants Ordway, Floyd, and Pryor, Corporal Warfington, and the twenty-nine privates. As the Oto and Missouria delegation approached, the soldiers came to attention, shouldered their arms, dressed right, and passed in review. Captain Lewis then stepped forward to deliver his long speech announcing American sovereignty over the Louisiana Territory, declaring that the soldiers were on the river "to clear the road, remove every obstruction, and make it a road of peace," and urging the Oto and Missouria tribes to accept the new order. According to Private Gass, the chiefs were "well pleased" with what Lewis said and promised to abide by his words. The chiefs and officers then smoked the peace pipe and Lewis distributed peace medals and other gifts to the chiefs. The council closed with a demonstration of the expedition's air gun, designed to awe the Indians. Like a BB gun, the air gun operated by air pressure, was nearly silent, and was capable of firing a .31-caliber round forty times before recharging. Upon conclusion of the council, the expedition continued upriver.

Tragedy struck the expedition on 20 August when Sgt. Charles Floyd died of what modern medical authorities believe was peritonitis from a perforated or ruptured appendix. Floyd had been ill for some weeks, but

nothing Lewis or Clark did seemed to help. On 19 August he became violently ill and was unable to retain anything in his stomach or bowels. Lewis stayed up most of the night ministering to him, but Floyd passed away just before noon the next day. That afternoon the expedition buried Floyd with full military honors near Sioux City, Iowa, on the highest hill overlooking a river the men named in tribute to their stricken comrade. Sgt. Charles Floyd was the only member of the Lewis and Clark Expedition to lose his life. Two days later the captains ordered the men to choose Floyd's replacement. Pvt. Patrick Gass received nineteen votes, while Pvts. William Barton and George Gibson each received five. In their orders of 26 August, Lewis and Clark appointed Patrick Gass to the rank of sergeant in "the corps of volunteers for North Western Discovery." This was the first time the captains used this term to describe the expedition.

The Corps of Discovery entered Sioux country on 27 August near Yankton, South Dakota. As the boats passed the mouth of the James River, a young Indian boy swam out to meet one of the pirogues. When the expedition pulled to shore, two more Indian youths greeted them. The boys informed Lewis and Clark that a large Sioux village lay not far up the James River. Anxious to meet the Yankton Sioux, the captains sent Sergeant Pryor and two Frenchmen with the Indians to the Sioux village. They received a warm welcome and arranged for the chiefs to meet Captains Lewis and Clark. On the morning of 29 August, the Corps of Discovery met the Yankton Sioux, with both parties dressed in full regalia. As the Sioux approached the council, the soldiers came to attention, raised the American flag, and fired the keelboat's bow swivel gun. The Yanktons also had a sense of drama. Musicians playing and singing preceded their chiefs as they made their way to the American camp. After greeting one another, Lewis gave his basic Indian speech. When he finished, the chiefs said they would need to confer with the tribal elders. Lewis was learning Indian protocol, which required of him patience and understanding. The captains then presented the chiefs with medals, an officer's coat and hat, and the American flag. After the formalities were over, young Sioux warriors demonstrated their skill with bows and arrows. The soldiers handed out prizes of beads. In the evening the men built fires, around which the Indians danced and told of their great feats in battle. The Corps of Discovery was truly impressed with the peaceful Yankton Sioux. Later, the same could not be said about the Teton Sioux.

From the time they had left St. Louis, Captains Lewis and Clark knew they would eventually have to face the aggressive Teton Sioux. Careful diplomacy would be required. On one hand, the Teton Sioux had a bad reputation for harassing and intimidating traders and demanding

toll. On the other hand, of all the tribes known to Jefferson, it was the powerful Teton Sioux whom he had singled out in his instructions for special attention. Jefferson urged Lewis and Clark "to make a friendly impression" upon the Sioux. Acutely aware of the often-violent tactics the Teton Sioux used to control the Upper Missouri, the expedition, in Clark's words, "prepared all things for action in case of necessity."

On the evening of 23 September, just below the mouth of the Bad River (opposite present-day Pierre, South Dakota), three Sioux boys swam across the Missouri River to greet the Corps of Discovery. Anxious to begin talks, the captains told the boys that their chiefs were invited to a parley the following day. But the next afternoon, as the Corps of Discovery was preparing for the council, Pvt. John Colter (who had gone ashore to hunt) reported that some Teton warriors had stolen one of the expedition's horses. Suddenly, five Indians appeared on shore. As the captains tried to speak with the Indians, they realized that neither group understood the other. Later that evening, Lewis met with some of the Sioux leaders, who promised to return the horse. In his journal, Lewis reported "all well" with the Sioux.

Early on Tuesday morning, 25 September, on a sandbar in the mouth of the Bad River, the Corps of Discovery met the leaders of the Teton Sioux: Black Buffalo, the Grand Chief; the Partisan, second chief; Buffalo Medicine, third chief; and two lesser leaders. The council opened on a generous note, with soldiers and Indians offering food to eat. By ten o'clock both banks of the river were lined with Indians. At noon the formalities began. Lacking a skilled interpreter, Lewis made a much shorter speech, but one that upheld the essential elements established in his earlier talks. After the Corps of Discovery marched by the chiefs, Lewis and Clark presented them with gifts suited to their stature. Evidently unaware of factional Sioux politics, the captains inadvertently slighted the Partisan and Buffalo Medicine. The chiefs complained that their gifts were inadequate. Indeed, they demanded that the Americans either stop their upriver progress or at least leave with them one of the pirogues loaded with gifts as tribute. Hoping to divert their attention, Lewis and Clark took the three chiefs in one of the pirogues to the keelboat, where Lewis demonstrated his air gun. Unimpressed, the chiefs repeated their demands. After some whiskey, the Partisan pretended to be drunk. Fearing a bloody melee, Clark and three men struggled to get the Indians ashore. When the pirogue landed, three young warriors seized the bow cable. The Partisan then moved toward Clark, speaking roughly and staggering into him. Determined not to be bullied, Clark drew his sword and alerted Lewis and the keelboat crew to prepare for action. Suddenly, soldiers and Indians faced each other, arms at the ready. A careless action by an individual

on either side might have touched off a fight that might have destroyed the expedition. Fortunately, the members of the corps held their fire, and Lewis, Clark, and Black Buffalo calmed the situation.

Over the next two days both sides tried to ease tensions. The Sioux held an impressive ceremony at their village on the evening of 26 September. After Black Buffalo spoke, he said a prayer, lit the peace pipe, and offered it to Lewis and Clark. After the solemnities were over, the Corps of Discovery was treated to all of the Sioux delicacies, and hospitality reigned in the camp. At nightfall, a huge fire was made in the center of the village to light the way for musicians and dancers. Sergeant Ordway found the music "delightful." Shortly after midnight the chiefs ended the festivities and returned with Lewis and Clark to the keelboat, where they spent the night. The next day Lewis and Clark made separate trips to the Sioux villages and presented more gifts. On 28 September, as the Corps of Discovery made final preparations for departure, Black Buffalo and the Partisan made their now-familiar demand that the expedition remain with them. Both Lewis and Clark were weary of the constant demand for gifts and sensed trouble from the well-armed Sioux warriors lining the banks of the river. After an angry exchange of words, Lewis tossed some tobacco to the Indians. Realizing that he could not keep the expedition from leaving, Black Buffalo ended the confrontation and allowed the boats to pass.

News of the Expedition's confrontation with the Teton Sioux spread rapidly up and down river. Captains Lewis and Clark had demonstrated sound leadership and bold determination, while the training, discipline, and teamwork of the men had gained them much prestige. While the success of the expedition at Bad River was due in large part to Chief Black Buffalo, who sought to avoid bloodshed, the fact that the Sioux had permitted the Americans to pass gave hope to the tribes of the upper Missouri. Between 8 and 12 October, the Corps of Discovery visited the Arikara villages in north central South Dakota. The councils went smoothly: The Arikara chiefs were pleased with their gifts and amazed with the air gun, while the captains learned much about the surrounding country and its tribes. On 26 October, five days after the first snow fell, the expedition arrived near the junction of the Knife and Missouri Rivers, roughly sixty miles upstream from present-day Bismarck, North Dakota, and 1,600 miles from Camp River Dubois. This was the home of the Mandan and Hidatsa tribes.

Described as "the central marketplace of the Northern Plains," the five Mandan and Hidatsa villages attracted many Europeans and Indians alike. With a population of nearly 4,400, this was the largest concentration of Indians on the Missouri River. After visiting all five villages, Lewis and Clark prepared for their important council scheduled for 28 October.

This would be the largest council yet, bringing together leaders from the Mandan, Hidatsa, and Arikara tribes. That Sunday weather prevented Lewis and Clark from holding their meeting, so the captains spent the day entertaining the chiefs who had arrived and reconnoitering the Missouri River for a good location for their winter quarters. On 29 October, just three days after arriving, Captains Lewis and Clark held their most impressive council to date. After the usual display of American military prowess, Lewis gave a speech that not only stressed American sovereignty, but also sought harmonious relations among the tribes themselves. Next came the distribution of gifts to the chiefs. Then Lewis ended the proceedings with a display of his air gun, "which appeared to astonish the natives very much."

With the onset of winter, the Corps of Discovery had to find a suitable place for their camp. On 2 November, Captain Clark selected a site directly opposite the lowest of the five Indian villages and two miles away from it. The next day the Corps of Discovery set to work building a triangular-shaped structure that consisted of two converging rows of huts (or rooms), with storage rooms at the apex (the top of which provided a sentry post) and a palisade with gate at the base or front. The walls were about eighteen feet high, and the rooms measured fourteen feet square. The men finished the fort on Christmas Day 1804 and named it Fort Mandan in honor of their neighbors. For security, the captains mounted the swivel cannon

Map of the Lewis and Clark Expedition

from the bow of the keelboat on the fort, kept a sentry on duty at all times, refused Indians admittance after dark, and kept the gate locked at night.

While at Fort Mandan, the Corps of Discovery continued its association with the Indians. The soldiers took part in Indian hunting parties and social events and built goodwill by providing rudimentary medical care and the services of their blacksmith, John Shields, to the tribes. They took time to speak with British and French-Canadian traders who were well established with the Indians, and gained valuable intelligence. On 27 October, they hired Rene Jessaume as an interpreter with the Mandan. A week later they recruited French-Canadian fur trader Baptiste Lepage into the permanent party to replace Private Newman, who had been "discarded" from the expedition for "repeated expressions of a highly criminal and mutinous nature." Then they hired another French-Canadian fur trader, Toussaint Charbonneau, as an interpreter. The 44-year-old Charbonneau had been living and trading among the Hidatsa for the past five years and had been active on the Upper Missouri since at least 1793. Later, in March 1805, Lewis and Clark hired Charbonneau to accompany the expedition west and agreed that he could bring along his young Shoshone wife, Sacagawea, who had given birth a month earlier to a boy they named Jean Baptiste.

On 6 April 1805, Lewis and Clark sent the keelboat back to St. Louis. In the keelboat were Corporal Warfington; six privates (including Newman and Reed, who had been discharged from the expedition for desertion); Gravelines, the pilot and interpreter; two French-Canadian traders; and an Arikara chief returning to his village. The next day the remainder of the Corps of Discovery departed the Mandan villages in two pirogues and six dugout canoes heading north. Along the way west, the Expedition continued to note abundant plant and wildlife. The scenery was stunning, and spirits were high. On 14 April Clark saw his first grizzly bear. Eleven days later the corps reached the mouth of the Yellowstone River and camped there. On 10 May the men saw their first moose. A week later Clark noted in his journal that the men were beginning to be use deerskins to make moccasins and leggings, as the original uniform trousers were wearing out.

Lewis and Clark faced their first major navigational test on 2 June 1805. Arriving at the junction of two large rivers, the captains needed to decide correctly which fork was the Missouri. Between 4 and 8 June, Lewis and a party reconnoitered the northwest branch, which Lewis later named the Marias River, while Clark and another group explored the southwestern branch. After comparing their notes, reevaluating their intelligence, and studying the maps they had brought from St. Louis, Lewis and Clark determined that the southwestern branch was the Missouri River, even though all their men thought otherwise. Nevertheless, in a great tribute to

their leaders, the men followed Lewis and Clark, although they believed the captains were wrong. Then, on 13 June, Lewis saw a majestic sight: the Great Falls of the Missouri River. The captains had been right. Here, the Corps of Discovery made camp and prepared for the great portage.

Lewis and Clark were proud of their men. The Corps of Discovery was "zealously attached to the enterprise, and anxious to proceed." Indeed, as Lewis wrote, there was not "a whisper of discontent or murmur" among the men, who acted in unison and "with the most perfect harmoney [sic]." That the Corps of Discovery was a tough, resourceful, and tightly knit group was due to the great leadership of the two captains, who complemented each other so well and had molded their troops into a confident and cohesive force. They would need that confidence and cohesiveness during the arduous eighteen-mile portage around the Great Falls. Over the next three weeks, the Corps of Discovery struggled up steep slopes, over prickly pear cactus thorns and jagged ridges, around gullies and ravines, in the scorching summer heat to complete their passage of the falls. The expedition rested for two days and continued the journey on 14 July.

On 12 August, the Corps of Discovery reached the source of the Missouri River. The next day an advance party of Lewis, Drouillard, and two privates encountered the Shoshones. Using friendly hand signals and gifts, the soldiers managed to win the trust of the Indians. Four days later Clark and the rest of the Corps of Discovery joined Lewis and established Camp Fortunate. At the council that evening, Sacagawea was there to interpret. But before the meeting began, she recognized the Shoshone chief Cameahwait as her brother. She immediately embraced him. Lewis wrote that the reunion was "really affecting." More gifts, promises of future trading, and the good fortune that the chief of the Shoshones was the brother of Sacagawea enabled the party to secure horses and guides for the journey along the Continental Divide and over the rugged Bitterroots to the country of the Nez Perce Indians. The hard, forced march across the Rockies along the Lolo Trail, where the freezing cold and lack of food pushed the Corps of Discovery to the limits of its endurance, ended in late September, when the advance party under Clark met the Nez Perce.

On 23 September, Lewis and Clark held a council with Twisted Hair and some lesser chiefs of the Nez Perce. Anxious to get to the Pacific (and of the fact that they were no longer in U.S. territory), the captains dispensed with the usual displays of American military might and instead passed out medals and gifts, explained their mission to Twisted Hair, and requested his assistance in building canoes for the expedition. Indeed, the soldiers were so weak from crossing the Rockies that they could hardly move and spent nearly a week recovering. The Nez Perce could have easily destroyed the

expedition, but thanks largely to their generosity and kindness, the canoes were finished by 6 October, and the Corps of Discovery was ready for its final leg to the Pacific.

On 7 October, the Expedition began its journey down the Clearwater, Snake, and Columbia Rivers to the ocean. In dealing with the tribes they encountered along the way, Lewis and Clark followed their usual practice of expressing joy at meeting the Indians, urging them to make peace with their neighbors, handing out gifts, and promising more trade goods from future American traders. To impress the tribes, the Corps of Discovery occasionally paraded in formation or showed off a magnifying glass, the air gun, or another device. Friendly talk and displays of the expedition's military prowess usually impressed the Indians and guaranteed safe passage, although the soldiers were less successful in halting the intertribal warfare.

In the distance lay the Pacific Ocean. On 7 November, the soldiers spotted an inlet from the Pacific near the mouth of the Columbia River. "Great joy in camp," Clark wrote in his journal, "we are in view of the Ocian [sic] . . . this great Pacific Octean [sic] which we been so long anxious to See [sic]." As soon as they arrived at the ocean, Lewis and Clark began reconnoitering for a site to make their winter camp. After exploring the region along the northern shore of the Columbia near the ocean, the Corps of Discovery crossed the Columbia to its southern side, where it was more sheltered from the heavy winds and rough seas. There, the soldiers built Fort Clatsop close to the present location of Astoria, Oregon.

The men of the Corps of Discovery named their winter quarters after the local tribe, as they had the previous winter. Fort Clatsop was about fifty feet square, with two structures that faced each other. One structure was divided into three rooms that housed the three enlisted messes. The other structure was divided into four rooms, one of which served as quarters for the captains and another the Charbonneau family. The third was the orderly room, the fourth a smokehouse. Palisade walls joined these two structures. At one end was the main gate; at the other a smaller, "water gate" (fresh spring water was about thirty yards away). In the middle of the fort was a parade ground. On 30 December the Expedition completed Fort Clatsop as its winter quarters, establishing tight security to safeguard its equipment and to avoid any trouble. Clark wrote that "the Sight [sic] of our Sentinal [sic]" brought a sense of peace and security to the Corps of Discovery.

Life at Fort Clatsop was depressing. Of the 112 (some say 102) days the expedition was there, it rained every day except twelve, and only half of those were clear days. Most of the men suffered from being constantly wet and cold, and their clothing was rotting off their backs. Making salt was a vital diversion, but boiling ocean water was a slow and tedious process.

After two months the operation produced only one bushel of salt. Without salt, preserving food in the wet and humid weather was a serious problem. To make matters worse, hunting parties had a difficult time finding enough palatable food for the expedition. Despite these challenges, Lewis and Clark kept everyone busy, including themselves. Lewis spent much of his time writing in his journal on botanical, ethnological, meteorological, and zoological topics, while Clark completed the first map ever made of the land between North Dakota and the Pacific coast. Together they discussed what they had seen and learned from the Indians.

After three months of constant rain, dietary problems, fleas, and boredom, the Corps of Discovery left Fort Clatsop on 23 March 1806. Concerned with the security of the expedition, the two captains wanted "to lose as little time as possible" getting to the Nez Perce. They decided to return along the same path they had come, satisfied that it was the best possible route. Even though security was rigid, at various points on the way up the Columbia, Lewis and Clark had to use the threat of violence to preclude trouble with the Indians. In early May they finally reached their old friends, the Nez Perce. Once again, the Nez Perce demonstrated their hospitality by feeding and taking care of the Corps of Discovery. During a two-month stay with the Nez Perce, Lewis and Clark held councils with the tribal elders, while their men participated in horse races and other games with young Indian warriors. Clark also used his limited medical skills to created more goodwill. These activities built great relations with the Indians. Indeed, Lewis wrote the Nez Perce considered Clark their "favorite physician."

On 10 June, the Corps of Discovery set out toward the Lolo Trail, over the objections of the Nez Perce. The Indians had warned Lewis and Clark that the snow was still too deep to attempt a recrossing of the Rockies. Eager to get home, the captains ignored this sound advice and proceeded on without Indian guides. In a week the expedition found itself enveloped in snow twelve to fifteen feet deep. Admitting that the going was "difficult and dangerous," Lewis and Clark decided to turn back. "This was the first time since we have been on this long tour," Lewis wrote, "that we have ever been compelled to retreat or make a retrograde march." Sergeant Gass agreed, and noted that most of the men were "melancholy and disappointed." Two weeks later, the Corps of Discovery set out once again, this time with Indian guides. Averaging nearly twenty-six miles a day, the expedition took just six days to reach the eastern side of the Rockies. On 30 June, Lewis and Clark set up camp at Travelers Rest. There, the Corps of Discovery rested for three days before implementing the final portion of its exploration.

According to the plan Lewis and Clark had formulated at Fort Clatsop, they split their command into four groups. Captain Lewis, Sergeant Gass, Drouillard, and seven privates would head northeast to explore the Marias River and hopefully meet with the Blackfeet to establish good relations with them. At the portage camp near the Great Falls, Lewis would leave Gass and three men to recover the cache left there. Captain Clark would take the remainder of the expedition southeast across the Continental Divide to the Three Forks of the Missouri. There, he would send Sergeant Ordway, nine privates, and the cache recovered from Camp Fortunate down the Missouri to link up with Lewis and Gass at the mouth of the Marias River. Clark, four privates, the Charbonneau family, and York would then descend the Yellowstone River to its juncture with the Missouri River. Meanwhile, Sergeant Pryor and three privates would take the horses overland to the Mandan villages and deliver a letter to the British North West Company, seeking to bring it into an American trading system Lewis sought to establish. Lewis and Clark would unite at the juncture of the Missouri and Yellowstone Rivers in August.

The willingness of Lewis and Clark to divide their command in such rugged, uncertain, and potentially dangerous country shows the high degree of confidence they had in themselves, their noncommissioned officers, and their troops. In addition to the physical challenges the expedition would certainly meet, war parties of Crow, Blackfeet, Hidatsa, and other tribes regularly roamed the countryside and threatened to destroy the expedition piecemeal. By dividing their command in the face of uncertainty, Lewis and Clark took a bold but acceptable risk to accomplish their mission.

Separated for forty days, the Corps of Discovery proceeded to accomplish nearly all its objectives. Lewis and his team successfully explored the Marias but narrowly escaped a deadly confrontation with the Blackfeet in which two Indians died. What had begun as a friendly meeting turned into a tragedy. On the afternoon of 26 July, Lewis came upon several Blackfeet, greeted them, handed out a medal, a flag, and a handkerchief, and invited them to camp with his party. They agreed. Lewis was thrilled, but at the same time somewhat apprehensive: the Nez Perce, the Shoshoni, and other plains tribes had warned Lewis to avoid their traditional enemy. At council that evening, Lewis discussed the purpose of his mission, asked the Blackfeet about their tribe and its trading habits, and urged them to join an American-led trade alliance. During the discussion, Lewis noticed that the Indians possessed only two guns; the rest were armed with bows, arrows, and tomahawks. The meeting concluded with smoking the pipe. Nevertheless, after standing first watch, Lewis woke Reubin Field and ordered him to observe the movements of the Blackfeet and awaken him

and the others if any Indian left the camp.

At daybreak Joseph Field was standing watch without his rifle. As the Blackfeet crowded around the fire to warm themselves, Field realized he had carelessly left his rifle unattended beside his sleeping brother Reubin. Suddenly, Drouillard's shouts awakened Lewis, who noticed Drouillard scuffling with an Indian over a rifle. Lewis reached for his rifle, but it was gone. He drew his pistol, looked up, and saw an Indian running away with his rifle. At the same time, another Indian had stealthily slipped behind Joseph Field and grabbed both his and Reubin's rifles. The men chased the Indians, and Lewis and Drouillard managed to recover their rifles without incident. But when the Field brothers caught the Indian with their rifles, a fight ensued and the Blackfoot died of a knife wound to his heart. After recovering the weapons, the soldiers saw the Blackfeet attempting to take their horses. Lewis ordered the men to shoot if necessary. Running after two Blackfeet, Lewis warned them to release the horses or he would fire. One jumped behind a rock while the other raised his British musket toward Lewis. Instinctively, Lewis fired, hitting the Indian in the abdomen. The Blackfoot fell to his knees but returned fire. "Being bearheaded [sic]," Lewis wrote, "I felt the wind of his bullet very distinctly." Fearing for their lives, Lewis, Drouillard, and the Field brothers began a frantic ride southeastward to reunite with Sergeants Gass and Ordway at the mouth of the Marias. This they accomplished on 28 July, after riding nearly 120 miles in slightly more than twenty-four hours.

As Lewis and his party made their way from the site where they had encountered the Blackfeet, Sergeant Ordway's group had recovered the cache at Camp Fortunate, proceeded down the Missouri River, and linked up with Sergeant Gass without incident. Gass' team had already recovered the cache at the portage camp at the Great Falls and was awaiting Lewis and Ordway. Meanwhile, while Clark and his party were exploring the Yellowstone River, Pryor could not complete his mission. On the second night out, a Crow raiding party stole all the soldiers' horses. Demonstrating their ingenuity, Pryor and his men kept their cool, walked to Pompey's Pillar (named in honor of Sacagawea's infant son, whom Clark nicknamed "Pomp"), killed a buffalo for food and its hide, made two circular Mandan-type bullboats, and floated downriver to link up with Clark on the morning of 8 August. Four days later, Lewis and his group found Clark along the banks of the Missouri River.

Clark was astonished to see Lewis lying in the white pirogue recovering from a gunshot wound in the posterior, but he was relieved to learn it was not serious. While hunting on 11 August, Private Cruzatte apparently had mistaken Lewis for an elk. On 14 August, the Expedition

reached the Mandan villages. After a three-day visit with the Mandans, the Corps of Discovery bit farewell to the Charbonneau family and Private Colter (who had requested an early release so he could accompany two trappers up the Yellowstone River) and proceeded down the Missouri River. On 1 September, Lewis and Clark held a council with some friendly Yankton Sioux. Three days later the Corps of Discovery stopped to visit the grave of Sergeant Floyd.

On the morning of 23 September 1806, the Corps of Discovery arrived at St. Louis to the cheers of crowds lining the riverfront. Over the past two hundred years, the Lewis and Clark Expedition has become famous as an epic of human achievement, covering nearly eight thousand miles in two years, four months, and ten days. Although the Corps of Discovery did not locate an uninterrupted, direct route to the Pacific Ocean as Jefferson had hoped, the expedition strengthened the nation's claim to the Pacific Northwest and paved the way for future Army expeditions, which helped to open the American West to commerce and settlement. The two captains and some of their men kept detailed journals and brought back invaluable geographic and scientific data, including 178 new plants and 122 previously unknown species and subspecies of animals. They also made friends with several Indian tribes and gave the nation a foothold in the region's fur trade.

The U.S. Army had made a singular contribution to the success of the Lewis and Clark Expedition. The Army furnished the organization and much of the manpower, equipment, and supplies. Military discipline and training proved crucial, both to winning over potentially hostile tribes and to overcoming the huge natural obstacles to crossing the continent. The journey of the Corps of Discovery demonstrated, as today's force continues to, that the U.S. Army has many roles and helps the nation in many ways.

II. THE CORPS OF DISCOVERY

The US Army in 1803-1804

The Regular Army of the United States of America was in a period of transition in 1803. The old Continental Army that fought in the War for Independence had been disbanded, and the new Army that would fight the War of 1812 would not begin its buildup until 1810. Much of this transition and change reflected the American people's mistrust of a large standing army. They believed that the oceans served as a protective shield from other countries and that the militia could be raised in time to meet any foreign threat. As a result, the Army went through five major reorganizations between 1784 and 1803 as it struggled to find its place in the new nation.

Congress discharged all but 80 men of the Continental Army in 1784. Then, less than a year later, Congress authorized 700 men for the 1st US Infantry to guard the northwest frontier. In 1792 the legislators increased strength allocations and reorganized the Army into the Legion of United States. The Legion, specifically designed to fight Indians on the northwest frontier, consisted of four sub-legions, each with two battalions of infantry and single companies of rifles, artillery, and cavalry. Both Meriwether Lewis and William Clark served as junior officers in the Legion. In 1794 the Legion played a major role in putting down the Whiskey Rebellion in western Pennsylvania.

The decisive defeat of the Indian alliance at the Battle of Fallen Timbers in 1794 resulted in increased responsibilities for the Army. These new responsibilities exceeded the capabilities of the legionary organization and required an increase in size of the Army. The Army was now required to garrison numerous forts along the northwest frontier, negotiate treaties with Indian tribes, administer frontier law, and manage affairs between the Indian tribes and white settlers. Then, in 1799, the fear of war with France caused an additional buildup of the regular army. Most of the new units were disbanded, though, when tensions between the two countries decreased. However, several enlisted soldiers who initially joined the Army during the buildup of 1799 would later be members of the Corps of Discovery.

The new century brought with it major changes for the Army. The War Department designated Brigadier James Wilkinson as the commanding general in 1800, and the nation elected Thomas Jefferson as the third president of the United States. Wilkinson gave the Army a new look when he revised uniform regulations in 1801 and, in 1802, began downsizing the force in accordance with instructions from the president. Wilkinson's new look included short haircuts and uniforms similar to European standards.

One who aided in downsizing the Army was the president's personal secretary, Captain Meriwether Lewis. Under the direction of the president and the secretary of war, Lewis compiled an order of merit list for the 269 officers serving in the Army. The criteria for the list not only included military proficiency but also rated whether they supported or opposed the current administration's Republican policies. Most of the 76 officers released from active duty were Federalists.

In 1803, the Army had only 3,220 officers and men. It consisted of two regiments of infantry and one regiment of artillery. Each infantry regiment was authorized 800 officers and men divided into 10 companies. Each regiment was commanded by a colonel and also had one lieutenant colonel, a major, an adjutant, and a sergeant major. The 10 companies rarely served together and were usually spread between distant frontier posts. The artillery regiment had 1,600 officers and men divided into 20 companies. As with the infantry, a colonel commanded the artillery regiment. However, the artillery colonel had a lieutenant colonel, four majors, and an adjutant to assist in the administration of the regiment. The artillery companies were widely separated, serving in coastal forts and along the frontier. Both infantry regiments and Captain Amos Stoddard's company of artillery provided volunteers for the Corps of Discovery.

The individual soldiers of the early 19th-century Army were a hardy lot. The nation was predominantly rural, with four out of every five citizens living on farms. The average household in 1800 had 6 to 10 people who lived in a small house with only one or two rooms. From childhood, they were accustomed to hard work, long days, and crowded living conditions. The average soldier was a volunteer and a native-born American. It was not until years after the Louisiana Purchase that the Army contained more diverse cultural backgrounds. In some ways, the Corps of Discovery led the way in this respect, having two half-French, half-Omaha Indian soldiers, Pierre Cruzatte and François Labiche, and one German-born soldier, John Potts.

The average age for an American soldier in 1803 was 26. However, many were as young as 17 or as old as 44. The Corps of Discovery was very close to the Army average with the average age for the 23 privates in the permanent party being 27. The youngest was Private George Shannon at 18 and the oldest was Private John Shields at 34. The soldiers of the corps also mirrored the Army as a whole, coming from numerous professions. These included: carpenters, blacksmiths, gunsmiths, tailors, musicians, interpreters, navigators, and hunters. The character and nature of the Army, from which Lewis and Clark solicited volunteers for the Corps of Discovery, was molded by the changes and transitions leading up to 1804.

The Army, because of its remote frontier assignments, had the proven ability to organize, equip, train, and lead a small unit into the unknown West. The captains, Lewis and Clark, had the logistics skills needed for planning and executing a major operation. The captains and their sergeants had the leadership skills needed to build and maintain a functioning team. Most important, the individual soldiers and the team as a whole had the tenacity, training, and determination needed to journey into the unknown.

Organization of the Corps of Discovery

The Army in 1803 had no existing table of organization for a corps of discovery. However, both Lewis and Clark were well acquainted with the organization and capabilities of an infantry company. The infantry company of their time was authorized one captain, one 1st lieutenant, one 2nd lieutenant, four sergeants, four corporals, four musicians, and 64 privates. In reality, the harsh and remote frontier duty meant that most units were drastically understrength. Frontier forts normally had a garrison of one or two companies. The average garrison strength of 39 officers and men for a fort on the frontier in 1804 was comparable to the size of the Corps of Discovery.

The captains organized the noncommissioned officers and men in a manner similar to that of an infantry company by dividing them into squads and messes. The 1804 squad was authorized 12 men, divided into two messes. The mess was an administrative unit that prepared and ate food together. In practice, squads of reduced-strength units normally had only one mess.

While wintering at Fort Dubois, the captains organized the volunteers into three squads led by Sergeants Floyd, Ordway, and Pryor. They also directed the sergeants to form two messes in each squad. The same detachment orders, dated 1 April 1804, also identified which soldiers would constitute what they called "the Permanent Party," those men who would go all the way to the Pacific (see Figure 1).

The captains created an additional mess under Corporal Warfington on 4 May 1804. They later simplified their organization by reducing the number of messes in each squad to one in the detachment orders dated 26 May 1804. They reorganized the corps into five squads or messes. Three squads headed by the sergeants constituted the permanent party. A fourth squad led by Corporal Warfington was designated as the return party, which would return to the east after the first winter. Baptiste Deschamps headed a fifth squad of civilian contract boatmen (see Figure 2).

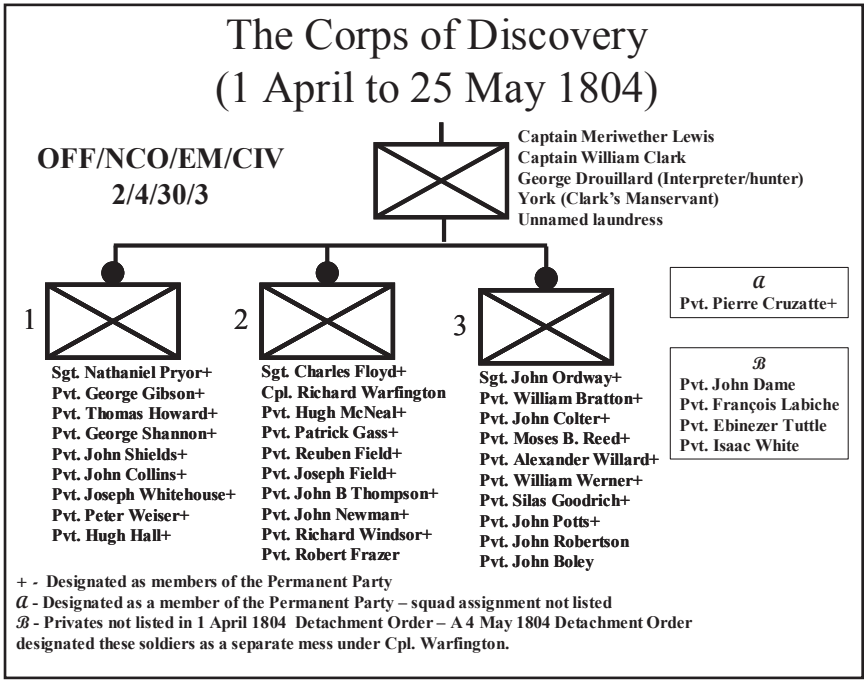

Figure 1

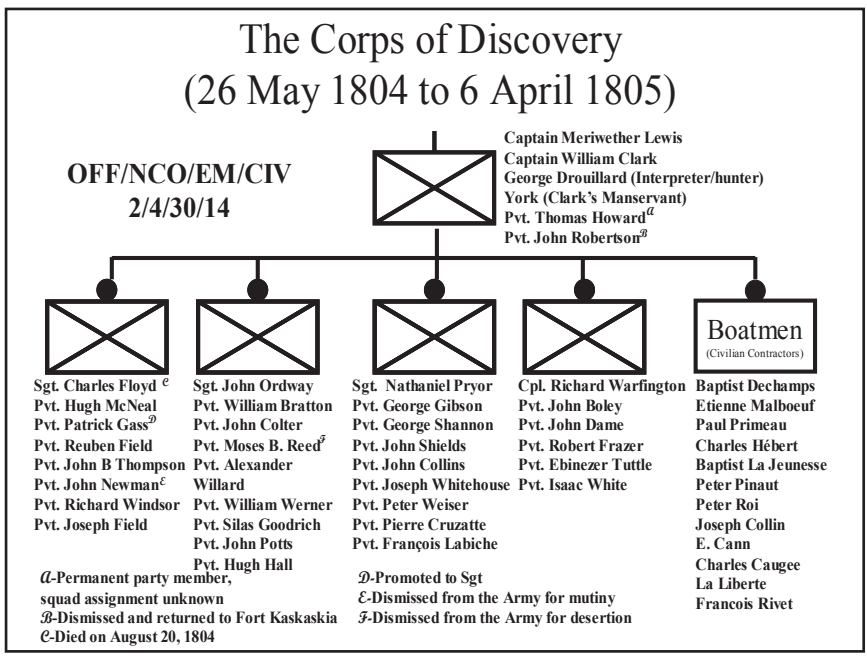

Figure 2

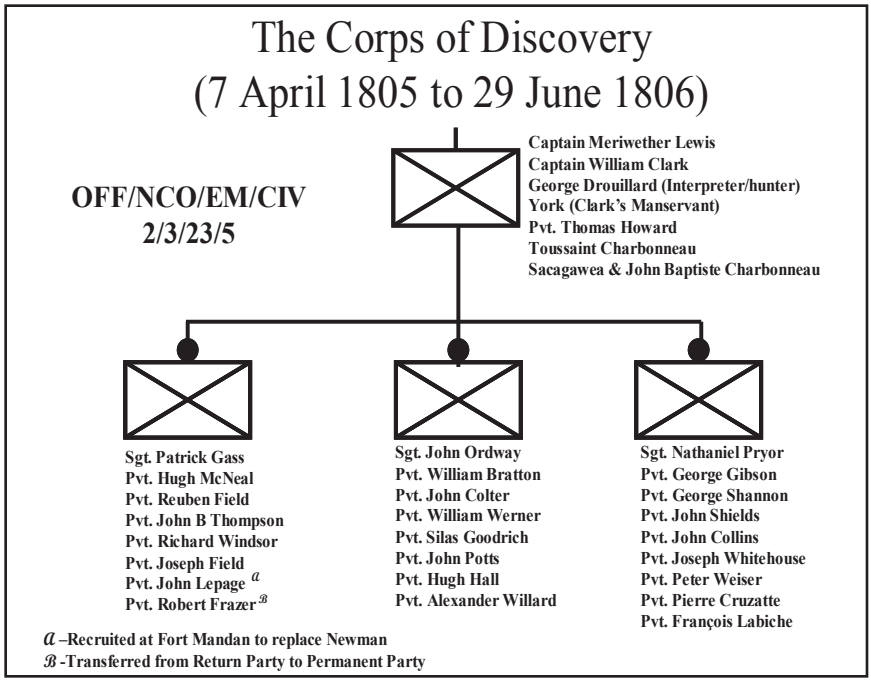

Figure 3

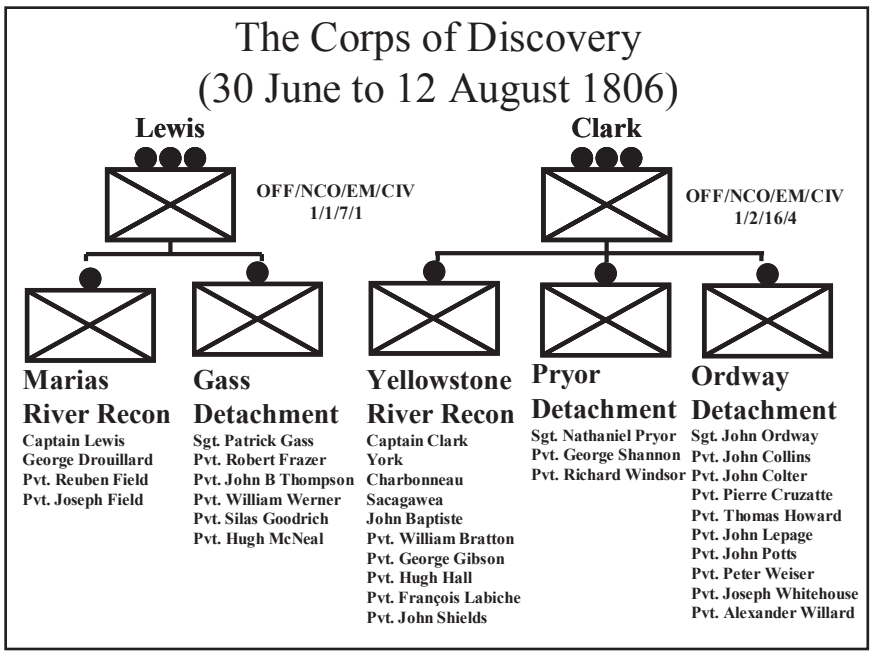

Figure 4

Corporal Warfington's squad and the remaining contract boatmen (some of the boatmen were discharged at Fort Mandan), returned to the east in the keelboat after wintering at Fort Mandan. The captains continued west with the remaining three squads on 7 April 1805. The Corps of Discovery continued to use the three-squad organization for the remainder of the journey to the west and most of the eastward return trip (see Figure 3).

Although the Corps of Discovery kept the three-squad organization during the first part of its 1806 return to the east, the captains decided to divide the corps so that more ground could be explored east of the Rocky Mountains. This required a significant task reorganization of the Corps of Discovery. During the period between 30 June and 12 August 1806, the Corps of Discovery operated as five separate detachments, each with different missions (see Figure 4).

Captain Lewis' group explored the Marias River. Sergeant Gass' detachment prepared the Upper Portage Camp cache for the portage around the Great Falls. Captain Clark's group explored the Yellowstone River. Sergeant Pryor's detachment had the mission to move the horse herd from the head of the Yellowstone to the Mandan village. Finally, Sergeant Ordway's three-fold mission was to move the canoes from Camp Fortunate down the Missouri River to the Great Falls, take charge of the portage, and then link up with Captain Lewis at the junction of the Missouri and Marias Rivers (see Section I for more details and the activities of the separate groups).

The captains' decision to organize as a modified infantry company allowed them and the volunteers to operate in a familiar and proven organizational structure. The multiple squad organization provided the flexibility needed when moving through uncharted and possibly hostile environments. Equally important, it allowed the sergeants to concentrate on NCO business and the captains to accomplish officer business. Together the captains and their sergeants established a command climate that promoted successful mission accomplishment.

Weapons

The Army of 1803 had a varied array of weapons. Some were best suited for the brutal linear combat of the day; others were more suited for skirmishing and hunting. Although no exact list of weapons exists for the Corps of Discovery, a fairly accurate list can be compiled by studying the journals.

Model 1792 Contract Rifles. One of the most significant issues concerning the weapons of the Lewis and Clark Expedition is the question of which rifle they carried. We know that Lewis procured 15 rifles from the Harpers Ferry Arsenal. Gary E. Moulton's edition of the journals and Stephen Ambrose's *Undaunted Courage* identified the rifles as Harpers Ferry 1803 Rifles. However, many scholars today believe the 15 rifles were Model 1792 contract rifles.

The War Department did not authorize the development of the Harpers Ferry 1803 Rifle until two months after Lewis visited the arsenal. The arsenal developed the first prototype in December 1803 and began production in the 2nd quarter of 1804. These dates are long after Lewis departed the Harpers Ferry Arsenal with his 15 rifles.

The rifles that Lewis procured were most likely Model 1792 contract rifles. The Army had contracted almost 3,500 of these .45- to .47-calibers rifles in two procurements, the first in 1792 and the second in 1794. The Army reorganized after the Battle of Fallen Timbers and disbanded the Legion of the United States. As a result, the force structure no longer contained rifle-armed units, and the Army placed hundreds of Model 1792 contract rifles into storage.

The most probable theory is that Lewis selected 15 of the best rifles and directed the Harpers Ferry Armory to modify and refurbish them. The modifications completed by the arsenal included replacing trigger locks and attaching sling swivels. The armory stamped the locks with "Harpers Ferry 1803." This 1803 stamp is probably the main reason for the belief that the rifles were Harpers Ferry 1803 Rifles. Lewis also directed the gunsmiths to manufacture spare locks for each of the rifles and to shorten the barrels from 42 inches down to about 36 inches. The shorter barrels made the rifles handier for travel in boats and moving through rough terrain.

Pennsylvania or Kentucky Long Rifles. Some of the men on the expedition may have carried their own Pennsylvania or Kentucky long rifles. The average Pennsylvania or Kentucky long rifle was .45 caliber, weighed 9 pounds, and had a barrel length of 40 inches. Like the Model 1792 contract rifles, these long rifles were extremely accurate to 200 yards.

Model 1795 Musket and Bayonet. Most of the volunteers recruited from the frontier forts would have been armed with the Model 1795 Musket and Bayonet. This was the standard infantry arm for the period. The musket was approximately five feet long and weighed almost 9 pounds. The musket had a relatively high rate of fire for the day. A well-

trained soldier could fire three shots a minute (four if he began with a loaded weapon). It fired a heavy .69-caliber ball but was only accurate to about 100 yards. The musket-armed soldier could also attach a bayonet to the weapon. The bayonet allowed the musket to be used as a thrusting spear for close combat. The Model 1795 Musket Bayonet varied in length from 13 to 16 inches. Although intended for melee combat, the bayonet was most commonly used as a utility tool.

Fusils. Several journal entries mentioned the use of fusils by various members of the Corps of Discovery. The journals specifically indicated that both Clark and Toussaint Charbonneau owned fusils. A fusil was a lighter, shorter, and smaller-caliber version of the smoothbore musket. A military fusil was sometimes issued to officers and NCOs. It was also a civilian term that applied to any well-made and elegantly crafted smoothbore musket.

Air Gun. The air gun, mentioned often by Lewis in the journals, was much more than the modern day BB gun. The air gun was a .31 caliber rifle that looked like a Kentucky long rifle. The air reservoir was in the butt of the weapon and could be pumped up to 900 pounds per square inch. The fully charged weapon could fire up to 20 shots. The maximum range is not known, but journal entries indicate that it could be fired with accuracy to 50 yards. The air gun had an unusually loud discharge and often was used as a signal to guide hunters into the night camp. The primary purpose of the air gun was to impress the Indians during shooting demonstrations. Air gun demonstrations are mentioned 26 times in the journals.

Pistols. The pair of horseman's pistols Lewis obtained from the Philadelphia Arsenal were most likely Model 1799 flintlock pistols. Hundreds of these pistols would have been placed in storage after Jefferson disbanded all regular cavalry in the Army. Lewis also purchased a pair of pocket pistols with secret triggers for a sum of $10. Lewis frequently mentioned his pistols in journal entries. Most notably, he recorded the use of one of his horseman pistols in the skirmish with the Blackfeet Indians. It is highly probable that Clark also carried pistols. His most notable entry about pistols was that he traded a pistol for a horse on 29 August 1805.

Blunderbusses and Cannons. The journals also mentioned two blunderbusses and a small, 1-pounder cannon. The blunderbusses were short shoulder arms with a bell mouth. They were basically heavy shotguns used in an antipersonnel role. The small cannon had a bore of

about 2 inches and could either fire 16 musket balls or a 1-pound solid shot. The blunderbusses and the cannon were mounted on swivel mounts on the keelboat. The corps probably mounted the weapons on the walls of Fort Mandan during the second winter encampment. They cached all three weapons during the portage around the Great Falls. The corps recovered them on the return trip, and Lewis presented the small cannon to a Hidatsa chief as a gift.

Edged Weapons. The members of the Corps of Discovery also carried a variety of swords, spontoons, knives, and tomahawks. Both Lewis and Clark carried swords on the expedition. They mentioned the use of swords during the encounter with the Lakota Sioux and in other formal parades for the Indians. Typically, sergeants during this period also carried short swords. However, the journals made no reference of the NCOs carrying swords.

Officers during this time period also carried spontoons to signify their rank. The spontoon was a 61/2-foot wooden pole with an iron spearhead. We know from journal entries that both the captains sometimes carried spontoons. Although the spontoon was intended primarily as a ceremonial mark of rank, the two captains tended to use them for more practical purposes. Lewis frequently used his as a walking stick, and other references referred to them being used as rifle rests. The most spectacular events regarding their use were the accounts of Lewis using his spontoon against a grizzly bear and Clark using his to kill a wolf.

In addition to the weapons already mentioned, it is probable that all the corps members carried knives and tomahawks. During the planning phase of the expedition, Lewis ordered 15 knives and 18 tomahawks from the government stores. Because the rifle had no bayonet, the riflemen usually carried a tomahawk to use in close combat. The knife could also be used for close combat, but both weapons were most commonly used as utility tools.

Weapons Summary. The number and variety of weapons in the Corps of Discovery gave the unit the flexibility needed for its journey into the unknown. The corps had the firepower to defend itself and the ability to hunt and sustain itself during the long journey. The musket's higher rate of fire provided the necessary firepower for the unit to face an enemy force in a firefight. The attachment of the bayonet to the muskets gave the Corps of Discovery the ability to defend itself against an enemy in close combat. The major deficiencies of the musket were its short range and lack of accuracy. The corps supplemented the firepower of the muskets with pistols, edged weapons, blunderbusses and the cannon. Although they were some of the best weapons available for early 19th-century warfare, muskets were

not good weapons for hunting. The rifles supplemented musket fire with accurate and long-range skirmish fire. More important, they provided the corps with excellent weapons for hunting. The major shortcoming of the rifle was its slow rate of fire. A trained rifleman could fire one or two shots per minute compared to the trained soldier with a musket who could fire three or four shots a minute. The mixture of weapons provided the Corps of Discovery with the flexibility needed for almost any frontier situation.

Transportation

The Corps of Discovery traveled nearly 8,000 miles in two years, four months, and 10 days. It initially moved upstream along the Missouri and Jefferson Rivers. For the first 16 months, the members of the corps dragged, pulled, pushed, and rowed their boats against the prevailing current. Next, they walked or rode horses over the Rocky Mountains. Then, for the first time in 18 months, they canoed downriver on the final westward leg of the trip toward the Pacific. The corps waited out the winter on the west coast and then reversed the route back to St. Louis. In the last six months of the journey, the men struggled upriver toward the west face of the Rockies, then over the mountains, and finally downriver all the way to St. Louis. The Corps of Discovery thus used several different modes of transportation to accomplish its epic journey. These included: a keelboat, pirogues, canoes, horses, and bullboats.

The Keelboat. A keelboat was a large flat-bottom boat with a heavy timber (the keel) running down the of the entire center length of the boat. The purpose of the keel was to absorb the shock of striking underwater obstructions. Lewis had his keelboat built in Pittsburgh during the summer of 1803. The boat measured 55 feet long, 8 feet wide, and had a 3- to 4-foot draft. It used a 32-foot sailing mast and had 22 oars for propulsion. However, poling was the most common method for moving upstream, whereby the men planted long poles along the bottom of the river and pushed the boat upstream. The captains mounted a small swivel cannon on the bow and a blunderbuss on each side for protection against hostile forces. The boat included a cabin and lockers for storage. The locker tops also served as walkways for poling. It had a total carrying capacity of 12 to 14 tons. The corps used the keelboat on the first phase of its journey from St. Louis to Fort Mandan. After the first winter, the keelboat withdrew to St. Louis with the return party (see Figure 5).

The Pirogues. In 1803, the term *pirogue* (pronounced per-rogue) was a common name used on the Ohio River for any long, narrow, flat-bottom,

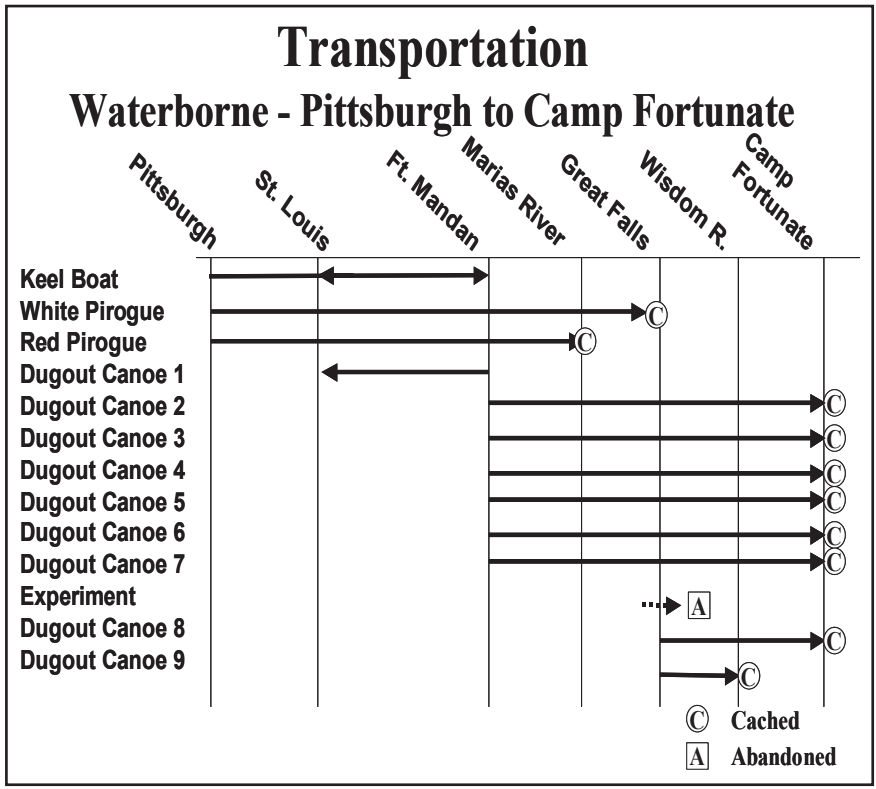

Figure 5

plank-sided boat. Lewis purchased two pirogues on the upper Ohio River. The first, called the "red pirogue," a flat-bottom plank craft with a square stern, was about 41 feet long and 9 feet wide. It was capable of carrying about 9 tons of cargo. The red pirogue was equipped with seven oars, a rudder, and a mast. The second was called the "white pirogue." This boat was slightly smaller and more stable than the red pirogue. The white pirogue was also equipped with a mast and sail. The corps cached the red pirogue with other excess baggage at the junction with the Marias River. The second pirogue was cached at the Great Falls. On the return trip, the captains found that the recovered red pirogue had rotted. They removed all useable material from it, including its iron nails, and then abandoned it. The corps found the white pirogue in good condition and floated it back to St. Louis (see Figures 5 and 7).

Canoes. The corps' primary means of transportation after making the portage around the Great Falls was canoes. The corps built 16 canoes during the journey: 11 made from cottonwood trees on the east side of

the Rockies and five made from ponderosa pines on the west side of the Rockies. They also obtained several additional canoes from the Indians.

At Fort Mandan, they built seven dugout canoes. The men built these by hollowing out large cottonwood logs with axes. After the first winter, they took six of the dugouts, along with the two pirogues, up the Missouri River. The seventh canoe returned to St. Louis with the keelboat. Next, they portaged the canoes around the Great Falls on homemade carts. After portaging the Great Falls, they constructed two more canoes from cottonwood logs to make up for the failure of Lewis' iron boat, the *Experiment* (discussed later in this section). From the falls, they then continued to struggle upstream to the source of the Missouri. The corps cached one canoe at the junction of the Wisdom River and the other seven at Camp Fortunate (see Figure 5).

After traversing the Rockies on horseback, the members of the corps built five dugouts from ponderosa pines. These were built using the Nez Perce method of burning and chipping out the hollow of the log. On the Clearwater River, they traded one of the dugouts for an Indian canoe. After wintering at Fort Clatsop, they abandoned one of the dugouts and obtained

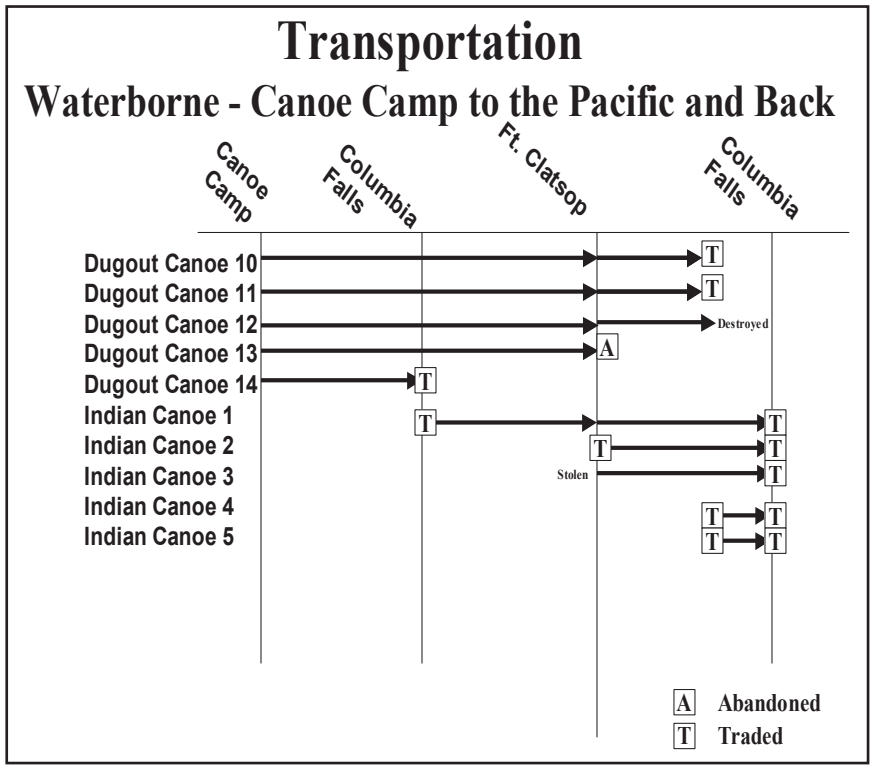

Figure 6

two additional canoes from the Indians for the eastward return trip. They purchased one with trade goods and stole another from the Clatsop Indians. The Indian canoes were lighter and better designed than the dugouts. With their higher, curved sides, they were less susceptible to being swamped in rough waters than the dugouts were. They lost one of the dugouts in an accident while struggling upriver and bartered away the remaining two for Indian canoes. Eventually, they traded all their remaining canoes for horses and continued eastward over the mountains (see Figure 6).

Clark's party recovered the seven dugout canoes cached at Camp Fortunate during its eastward journey in 1806. The men dismantled one of the canoes to get materials to repair the other six. Then Sergeant Ordway's detachment sailed the repaired canoes back to Great Falls, where they abandoned one of the canoes and portaged the remaining five around the falls. The reunited corps later used all five of these canoes on the journey back to St. Louis.

Clark had the men build two cottonwood dugout canoes during his exploration of the Yellowstone River. He increased their stability by lashing them together to form a crude catamaran. The members of the

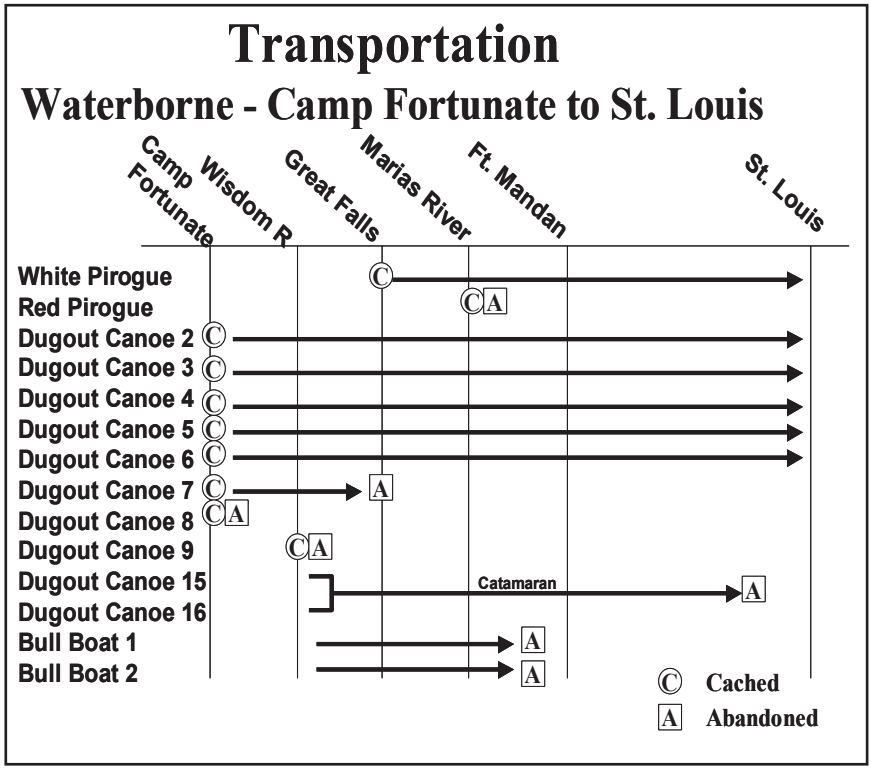

Figure 7

corps floated the catamaran most of the way to St. Louis but abandoned it just short of the city (see Figure 7).

***The* Experiment.** The *Experiment* was a collapsible iron-frame boat that Lewis designed and had built by ironworkers at Harpers Ferry. The corps carried the frame all the way to the Great Falls. The plan was that the *Experiment* would replace the pirogues after the portage around the falls. The *Experiment* was basically a large canoe frame. It was 36 feet long, 4 feet wide, and 26 inches deep. It was capable of hauling almost 2 tons of cargo. Unfortunately, the *Experiment* failed because there was no pine pitch available on the treeless prairie to waterproof the hull made of skins.

Lewis had the iron frame disassembled and put in the cache near the Upper Portage Camp. When Lewis returned to the area in 1806, he had it dug up and found the iron frame rusted but still serviceable. It is unknown whether the corps abandoned the frame at the Great Falls or perhaps later used its iron as trading material with the Mandan Indians.

Bullboats. Another form of transportation that played an important role throughout the expedition was the use of skin boats or bullboats. The corps learned to make these boats during their stay with the Mandan Indians. The bullboat was a crude saucer-shaped frame of sticks with a large animal hide stretched around it. The members of the corps used this type of boat (or sometimes even more crude log rafts) to make river crossings. The most notable use of bullboats was when Sergeant Pryor's Detachment lost its horses to a Crow Indian raiding party and built bullboats to float several hundred miles down the Yellowstone to catch up with Clark's group.

Horses. Adding the increased transport strength of horses was a critical part of Lewis' plan to cross the mountains of the Continental Divide. As early as July 1805, his journal entries indicated some sense of desperation to find the Shoshone Indians and obtain horses. He recognized that, without the horses, the corps would not be able to cross over the mountains and reach the Pacific Ocean before winter.

The corps used horses obtained from the Shoshone and Salish Indians to cross the Rocky Mountains during the 1805 westward phase of the expedition. At Camp Fortunate Lewis estimated that he needed 25 horses and successfully bartered with the Shoshone Indians for 29 horses. The horses were important for transporting personnel but were most critical for carrying supplies, which had previously been transported in seven dugout canoes. Lewis updated his transportation estimate after the corps' first week in the mountains. The rough and mountainous terrain quickly eroded

the physical condition of the horses. To replace seven of his worn-out horses, Lewis coordinated a trade with the Salish Indians. In addition to the seven replacements, he was able to acquire 11 more horses in the trade.

It is doubtful that the corps could have survived the 1805 crossing without the horses. Available game was too sparse to sustain the corps through hunting. Without the supplies carried by the packhorses and the eating of three colts, the corps' crossing of the Bitterroot Mountains would probably have failed.

The packhorses also carried critical trade goods needed to establish good relations with the Nez Perce Indians on the west side of the mountains. The Nez Perce welcomed the exhausted corps in 1805 and readily agreed to care for the corps' horses when the expedition continued to the west in canoes. In the 1806 eastward phase of their journey, the Nez Perce provided critical support to the corps. Through a combination of bartering and receiving gifts, the corps departed the Nez Perce homeland and began the eastward crossing of the mountains with more than 66 horses. Each of the 33 members of the corps had at least two horses, one for riding and another for baggage.

The corps' horses also played a vital role in the 1806 eastward portage of the Great Falls. In 1805 it took the 32 men and one woman of the corps 14 days to conduct the westward portage of the Great Falls. In 1806, Sergeants Ordway and Gass, 14 men, and four horses executed the portage in only eight days. This marked difference, for the most part, can be attributed to the prudent acquisition and use of horses. During the first portage the soldiers of the corps served as beasts of burden by harnessing themselves to the portage wagons and dragging the canoes around the falls. In 1806 the men used horses to accomplish the same task in significantly less time.

Logistics Planning and Support

Logistics planning played a major role in the success of the expedition. Equally important was the captains' demonstrated ability to solve logistics issues in innovative ways and obtain host nation support from the Indians.

Lewis accumulated many of the supplies that the expedition was going to need while still on the East Coast. He collected almost 2 tons of goods, using the $2,500 Congress had allocated for the expedition. These included: scientific and mathematical instruments, camp supplies, presents and trade goods for the Indians, clothing, arms and ammunition, medicine and medical supplies, a traveling library, and boats to haul the supplies.

The captains showed significant innovation in both logistics planning

and execution. Lewis directed the armory to attach sling swivels to the rifles. This allowed the men to sling the weapons on their backs and free their hands for other work. Also, Lewis' foresight to bring spare weapon parts gave the corps the ability to repair damaged and worn-out weapons. His idea to store gunpowder in sealed, lead containers protected the unit's gunpowder from numerous canoe overturns in the river. The lead containers also provided a resource for the manufacture of more bullets. The captains also numbered and marked all storage bags stowed on the boats. This made it easy to inventory supplies and provided ready identification of needed items without digging through numerous storage bags.

Lewis' decision to include a significant number of trade items in the original packing list probably saved the expedition from failure. Without the host nation support from the Indian nations, the corps could not have survived its two years in the wilderness. The horses provided by the Shoshone and Salish Indians allowed the corps to cross the Rocky Mountains before the onset of winter in 1805. Host nation support provided by the Nez Perce Indians was equally important. They saved the Corps of Discovery from exhaustion in 1805 and provided the horses needed to cross the mountains again in 1806.

Medical Support

The Corps of Discovery had no designated medical personnel during its journey into the unknown. The Army rarely assigned doctors below brigade or regimental level. In small units, such as the corps, the officers were responsible for the health of their men. Despite the lack of specialized medical support and its struggles to overcome food shortages, a harsh environment, exhaustion, illness, and injury, the corps had only one fatality. Sergeant Charles Floyd died on 20 August 1804, near present-day Sioux City, Iowa, from what modern medical experts believe was a ruptured appendix. Ironically, he probably would have died even if hospital care had been available because contemporary medical science had no cure available for this ailment.

Both Lewis and Clark had the common military training required for treating military injuries such as broken bones, cuts, gunshot wounds, and boils. Lewis, as a young boy, had also learned much about herbal medicine from his mother, a renowned country doctor. President Jefferson supplemented Lewis' skills by arranging for him to receive training in medical science from the country's leading medical expert, Dr. Benjamin Rush.

The state of medical science in 1803 was not advanced much beyond what was known in medieval times. Scientific medicine was based upon

the Depletive Theory. This theory taught that, if a person was sick, there was a bad substance inside the body that had to be removed. Doctors conducted the removal by sweating, increased urination, vomiting, purging, or bloodletting. Most of the available scientific medicines of the day were developed to cause one of those actions.

The list of medicines that Lewis purchased in Philadelphia for the expedition shows that he stocked both herbal remedies and scientific medicines. The list included: cinnamon, cloves, dried rhubarb leaves, nutmeg, tarter emetic, jalap root, Peruvian bark, glauber salts, nitre, laudanum, vitriol, benzoin, mercury chloride ointment, and Rush's Pills. Most of these were meant to purge the body, with Dr. Rush's "Thunderclapper" pills being the most infamous. These pills were extremely strong laxatives frequently prescribed by the captains for almost any ailment. However, many of the other items on the list were legitimate medicines. Peruvian bark contained quinine, making it a valid medicine, and benzoin was an effective disinfectant (although they had no concept of germs). Clark regularly used vitriol as an eyewash, which medical science did not fully replace until after World War II. Laudanum was a very effective pain reliever since its main ingredient is opium. The training Lewis received from Dr. Rush concentrated on how to administer these medicines, what dosages to give, and which medicines to use for which symptoms.

The corps experienced a variety of medical problems during the journey: Sacagawea almost died at the Great Falls of the Missouri, and twice the expedition had to stop because one of the captains was too sick to travel. Moreover, a significant number of the men contracted venereal disease; Lewis was shot in the thigh; and there were constant reports of men with tumors and boils. Sacagawea recovered after they ceased using scientific medicine and used the herbal medicine technique of administering mineral water. It was probably rest, definitely not the frequent administrations of Rush's pills, which cured Clark from what today is suspected to have been Colorado Tick Fever.

The captains treated each case with tremendous care and concern. However, with the exception of their treatment of boils, tumors, and blisters with bandages and time, most of their applications of the scientific method probably caused more harm than good. The primary reason the members of the corps survived their many trials and tribulations, along with the damaging effects of 1803 medical science, was that they were young, in good health, and in excellent physical condition.